KENTIX
Innovative Security

IMPLEMENTATION EXAMPLE WITH TOPOLOGY

Physical IT operation in the data center - Secure, transparent and scalable

Kentix ist Mitglied im
BSKI
Bundesverband für den Schutz Kritischer Infrastrukturen e. V.

Physical IT operation in the data centrer - Secure, transparent and scalable

The requirement

IT operation in a data center, whether in the company's own or in that of a third-party operator, places special demands on companies and organizations. The goal is to achieve an appropriate level of protection in accordance with legal and organizational requirements while conserving resources and at the same time ensuring highly available operation. At suite, cage and rack level, controlled access, its documentation and 24/7 monitoring of the locking status of the area to be protected must be established. Environmental parameters shall provide indications, even remotely, of possible sources of error, sabotage, or impending system failure (e.g., due to fire, leakage, etc.).

The calibrated measurement of the current consumption, incl. DGUV V3 - compliant leakage current measurement, is intended to provide additional transparency and safety. This measurement also helps to optimize the operation and to react quickly in case of abnormalities and deviations.

All data is to be clearly monitored in a dashboard from any location and alarms can be sent. Installation and operation should be cost-efficient and simple. Open interfaces should enable easy integration into third-party systems. Free scalability, modularity and cost-effective, simple maintenance must be part of the solution concept.

The Kentix system solution

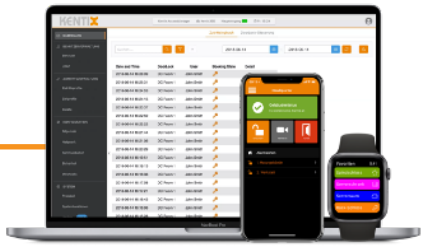
Access control is handled by the Kentix online IP access control system at the entrances to the suites, cages or directly at the IT rack. Locking and interlocking contacts monitor the status of the doors. Via an integrated web server application or open interfaces (LDAP, ReST-API, etc.), the system can be managed from a central location in real time and authorizations can be granted or revoked. Furthermore, it is documented who, when and where access was granted.

The MultiSensor-TI and MultiSensor-LAN are used to monitor undesirable environmental conditions in the suite, the cage, technical rooms and, if necessary, the IT rack.Both systems reliably monitor up to 20 m² for temperature, humidity, early fire detection, movement, sabotage, etc.. With its thermal image sensor, the MultiSensor-TI also monitors surface temperatures of e.g. UPSs or electrical sub-distributions and thus provides another important detection level to detect capital damage at an early stage. For monitoring leakage and contamination, up to 2 leakage and contamination sensors each are connected to the MultiSensors. I/O modules accept additional digital or analog sensors from third-party systems into the Kentix system.

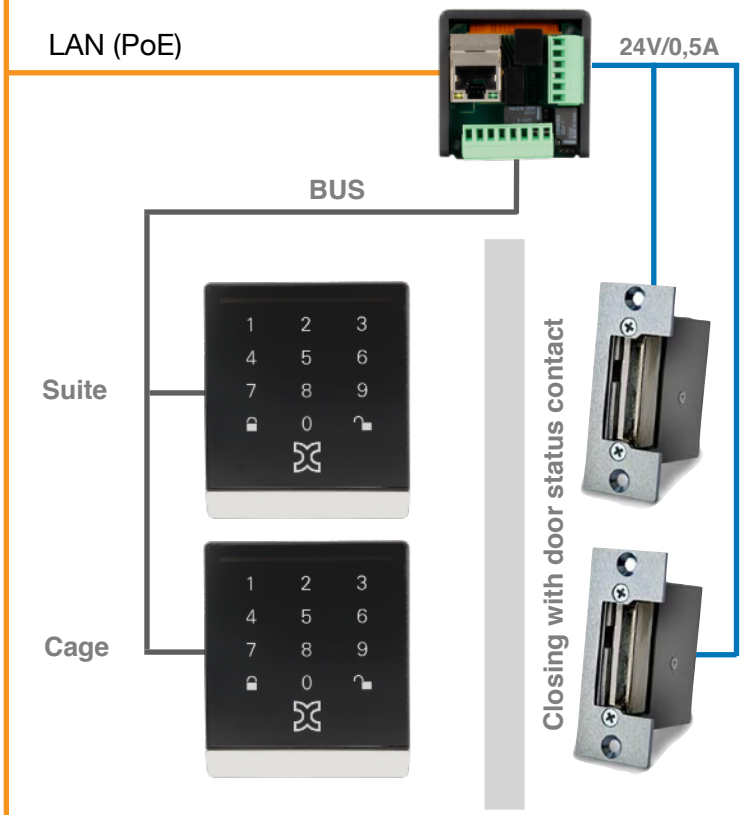
The Kentix AlarmManager takes over the management of the connected sensors and the monitoring of all determined values. When threshold values are exceeded, it sends alarms to users via SNMP, email, push message and redundantly via SMS.

For calibrated current measurement, the intelligent and highly available Kentix SmartPDUs are used. In addition to a DGUV V3 - compliant leakage current measurement, all important consumption parameters are measured and fed to the monitoring. Optionally, all IEC C13/C19 ports can also be switched and measured individually. The MultiSensor installed in the PDU provides data directly in the rack on temperature, humidity, fire gas and tampering, thereby creating granular transparency and security. The Kentix RA4 IP rack lock system can also be directly connected to the SmartPDU, simplifying installation, operation and maintenance.

Simple, timely and resource-efficient operation is realized through KentixOS. KentixOS is the integrated, freely scalable and modular IoT software platform that provides open interfaces for easy integration into third-party systems (ReST-API, WebHooks, SNMP, LDAP, etc.) in addition to web front-ends. At the same time, KentixOS is the basis for advanced AI analyses and visualizations.



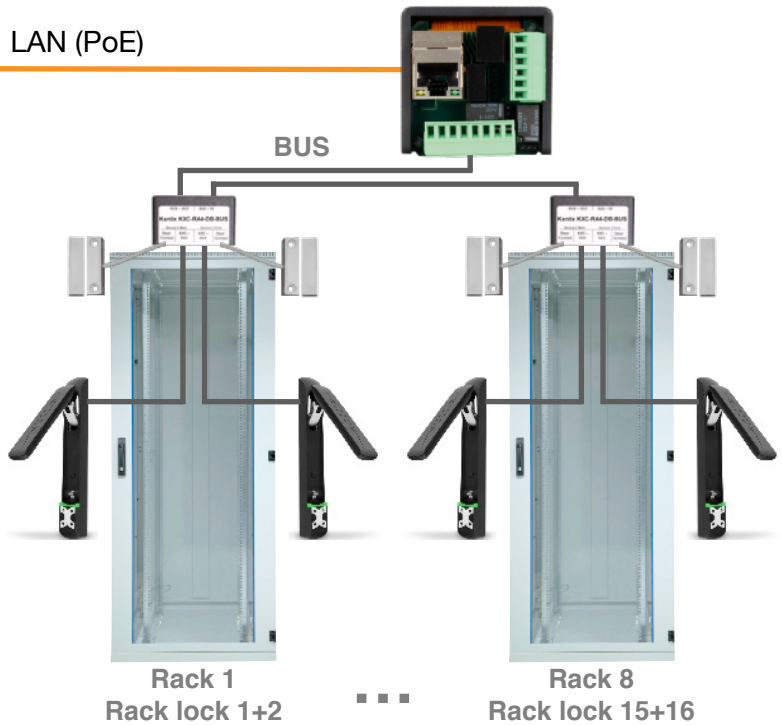
IP Access control Suite/Cage



AccessManager SmartRelay
ART: KXC-2-RS
Connection of up to 2 IP wall readers. Powered outputs for opening electromechanical locks. Centralized management through integrated web server.

IP wall reader WA3
ART: KXC-WA3
RFID and PIN code wall reader for indoor and outdoor use. The encrypted communication and power supply is via a bus connection.

IP access control IT rack



IP-Rackhebel System RA4
ART: KXC-RA4-IPX
Robuster Zink-Druckguss Hubhebel mit RFID- und PIN-Code Leser (auch 2FA). Bus Verkabelung mit Überwachung des Schließ- und Verschlussstatus von bis zu 16 Rackhebeln pro AccessManager

Distribution box RA4
ART: KXC-RA4-BX-XX
Distribution box for bus connection in the IT rack. Connection of 2 IP rack levers and magnet door contacts

Magnet door contact
ART: KDC1-W
Opening detector for direct connection to Kentix distribution box RA4. Cable length 2 m with Kentix system socket.

Environmental monitoring Suite/Cage

LAN (PoE)

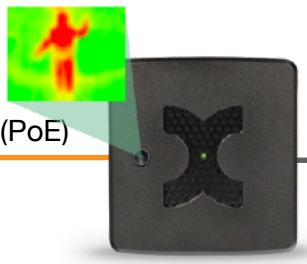
AlarmManager-PRO
ART: KAM-PRO
Central unit with network, radio and 4G. Monitoring and management of all sensors in the network. Redundant alerting via SNMP, email, push message or SMS.

MultiSensor-LAN
ART: KMS-LAN
8 integrated sensors for monitoring up to 19 hazards. 2-factor early fire detection. One MultiSensor LAN monitors up to 20 m².

LeckageSensor
ART: KLS03
Mounting on the floor or in the raised floor. For point detection or optionally with rope for larger areas.

Dust/dirt sensor
ART: KDS01
Optical dust/dirt sensor for the Detection of the degree of soiling in IT racks and raised floors

Environmental monitoring UPS/technology room



LAN (PoE)

Air conditioning
UPS systems
Generator

MultiSensor-TI
ART: KMS-TI
9 integrated sensors for monitoring up to 20 hazards. 4-factor early fire detection. Integrated thermal image sensor measures surface temperature at 1,024 measuring points.One MultiSensor TI monitors up to 20 m².

LeckageSensor
ART: KLS03

Digital I/O extension module
ART: KIOXXX
Enables the integration of digital and analogue sensors such as air conditioners, UPS systems or generators.

PowerMonitoring/Sicheres IT-Rack

LAN (PoE)

BUS

SmartPDU
ART: KPMDU
Kentix all-in-one system solution. SmartPDU in 40 or 2 height units incl. calibrated current measurement and all-current sensitive leakage current measurement (RCM). Modular combinations available. Integrated MultiSensor for granular monitoring of temperature, humidity, fire and overload.
Direct connection of the IP rack lever RA4 and other sensors possible.

IP-Rackhebel RA4
ART: KXC-RA4-IPX
Robust lift lever with RFID and PIN code reader. Bus wiring with monitoring of locking and closing status.

Magnet Türkontakt
ART: KDC1-W
Opening detector for direct connection to the Kentix system socket. Cable length 2 m with Kentix system plug (RJ45)

LeckageSensor
ART: KLS03
Mounting on the floor or in the raised floor. For point detection or optionally with rope for larger areas.

Dust/dirt sensor
ART: KDS01
Optical dust/dirt sensor for the Detection of the degree of soiling in IT racks and raised floors

LAN (PoE)

Useful system supplement for event documentation

LAN (PoE)

IP Camera (Indoor)
In the case of events (bookings, alarms, etc.) images are retrieved from the IP camera and assigned to the events. The images can be viewed in the event logs or sent by email.

Alarm siren Indoor/Outdoor
ART: KFLASH1
Loud (110dB) bright flashing light siren. siren. Simple connection via RJ45 connection to the Kentix system port